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Reconstructing spaces and places through blended work integrated learning

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This paper considers the emergence and ongoing development of an embedded, student-negotiated work placement model of Work Integrated Learning (WIL) in the engineering and built environment disciplines at an Australian metropolitan university. The characteristics of the model and a continuous improvement strategy are provided. The model is characterised by large student cohorts independently sourcing and negotiating relevant work placements and completing at least one, mandatory credit-bearing WIL unit. Through ongoing analyses and evaluation of the model more experiential and collaborative learning approaches have been adopted. This has included the creation of blended learning spaces using technology. The paper focuses on the five year journey travelled by the teaching team as they embarked on ways to improve curriculum, pedagogy, administrative processes and assessment - effectively relocating much of their interaction with students online. The insights derived from this rich, single case study should be of interest to others considering alternative ways of responding to increasing student enrolments in WIL and the impact of blended learning in this context.

Keywords: Work Integrated Learning (WIL), student-negotiated, blended learning

Background

The recently released report, commissioned by the Australian Fair Work Ombudsman (Stewart & Owens, 2013) on the nature and prevalence of unpaid work experience, notes that there is nothing new about combining work and education (see also Peach & Gamble, 2011). WIL is seen to benefit students, employers and the economy by producing the type of graduates demanded by employers and the professions. Stewart and Owens (2013) agree with Patrick, Peach, and Pocknee (2009) that many universities have enthusiastically embraced an increased emphasis on WIL through the inclusion of WIL targets in university strategic plans. Yet Australian universities are finding the sourcing of WIL work placement opportunities in many disciplines challenging. This may be contributing to the increase in unpaid placements

– the focus of the research undertaken by Stewart and Owens (2013) but whilst of concern is not the focus of this paper.

Billett (2010) argues, if the increasing demand for work placement opportunities for higher education students is to be met alternative approaches, such as student-negotiated work placements and/or the use of students' existing paid part-time work, are essential. For most of the students in this study WIL is mandatory. These students must find their own work placements and complete at least one credit-bearing unit related to this experience. This approach, introduced in 2007, replaced non-credit bearing industrial experience. Whilst it was argued that finding a work placement would enhance student agency and enable students to use existing, relevant work experience the shift to credit-bearing unit/s was also a way of funding associated activity such as marking and student support.

The embedded model was intended to provide a cost-effective, cohesive, pedagogically sustainable framework for authentic learning. The model was informed by Boyer's (1991) scholarship of integration of discipline theory and practice and the provision of generic and discipline-specific learning. It was also based on a 'transformative stakeholder ethos' where learning in the workplace is,

holistic, rather than task focused, [where] students are encouraged to develop new ideas through the exploration of subject matter and the actual workplace (Orrell, 2007).

The value of workplace exposure and the work environment, as a place of authentic learning, were identified as key features of the model (Franz, 2007; Savage, Davis & Miller, 2010). In establishing the model Savage, Davis and Miller (2010) argued that the challenges of the transition-to-work for students in engineering and built environment disciplines are best supported by authentic undergraduate experiences both on and off campus, inside and outside the classroom. They advocated an approach to the transition-to-work process that maximises the availability and efficacy of work experience and that replicates work-based models of social interaction in educational processes. This, they argued, requires a better understanding of the specific learning that occurs during the transitional stage. They also maintain the importance of a commitment to supporting students to develop graduate capabilities such as commitment, loyalty, professionalism, ambition, work/life balance, creativity and innovation, and willingness to learn. An embedded WIL model was seen as a cost-effective, sustainable way to acquire this experience along with the preparation and reflection afforded by the credit bearing on campus components.

Since 2007 the model has served large scale, high volume cohorts with disciplinary diversity between and within the cohorts. From 2011 and 2012 there were more than 900 WIL students from 17 sub-disciplines served by this arrangement. Up to five units can be taken individually as part of a 48 credit point WIL minor, that is, a specialisation in WIL focussed areas. The minor (see Table 1) affords students the opportunity to investigate the organisational culture of the workplace in which they undertake placement; apply academic learning to professional practice; assess the impact of social, cultural and global issues on their profession; and to engage in practice-led research using principles of action research methodology, i.e., plan, act, observe, reflect and review, to improve practice in their selected work context.

Table 1: WIL Minor

Unit	Focus
BEB701	[Re] orientation to the workplace
BEB702	The culture of practice. The individual and the collective
BEB703	Integrating academic knowledge 'to' and 'in' practice
BEB704	Global issues and the challenges of practice
BEB705	Practice-led research

Students must undertake at least BEB701 and complete between 14-90 days of work experience depending on the discipline. It is a requirement that students find their own work placement and negotiate the terms of the placement. Some students are able to use existing part time (or full time) work towards this requirement. Most students commence a work placement in second or third year and unless they decide to do the WIL Minor they undertake the first WIL unit in final year. This distinguishes the model from others where work placement and WIL units are done simultaneously. In this model the responsibility is clearly with students and employers to negotiate arrangements with minimal university intervention – although students are strongly encouraged to attend preparation seminars and refer to online materials. Students facing difficulties in finding a work placement are offered limited assistance with this issue the focus of continuous improvement efforts. Table 2 summarises the features of the model as it currently exists.

Table 2: Embedded model of WIL in engineering and built environment disciplines
(adapted from Peach, Larkin & Ruinard, 2012; Franz, 2007)

Features	Description
Type of WIL	Work Placement
Status	Mandatory (elective for design)
On campus credit-bearing units	First unit only is mandatory plus option of 4 unit minor
Disciplines	Undergraduate engineering and built environment
Work Placement Duration	14-90 days depending on discipline
Semester Offerings	Semester 1, Semester 2 and Summer Semester (BEB701 only)
Paid/unpaid	Usually paid
Placement Source	Students find own placement, negotiate work program and register placement with Faculty
Preparation for WIL	Community Blackboard site provides tools on finding a work placement; what to do during a work placement; and completing a WIL unit. Workshops are also provided each semester on Preparing for WIL and links provided to self-paced, online career development modules
Context	250-350 students per semester (3 semesters)
Delivery	Blended i.e. intensive, introductory face-to-face lectures, webinars facilitated by academic staff through the semester of enrolment in WIL unit/s
Assessment	Reports, presentations, literature reviews based on observation, reflection, and participation in workplace experiences and ongoing personal, professional development
Other requirements	Reflective field notes, work logs, employer feedback, peer review

The next section describes how feedback was gathered on the strengths and weaknesses of the model; responses to feedback; and impact of changes made.

Method

A process of continuous improvement has been underway since 2010 based on student, staff, and industry feedback. For example, in 2010, short, student surveys were administered each teaching period to gather data on the student learning experience to supplement data collected centrally. Over 300 students responded to requests to identify strengths of their experiences in the work place and in the WIL unit; to suggest improvements; and whether the first WIL unit should be offered over summer. In January 2010 members of the teaching team (n=7) were also asked to identify strengths and weaknesses of the current model. This feedback was summarised under headings of student and staff issues; unit content and assessment; communication and systems; and priority areas for action. Collaboration between the disciplines of business and engineering and built environment in 2010 provided the opportunity to conduct a series of focus groups with relevant industry partners. Three, two hour focus groups, involving twelve WIL employers, were held at the university in 2011. An analysis of these recorded discussion yielded common themes related to communication, mutual expectations, resilience and confidentiality (see Peach, Larkin & Ruinard, 2012). A brief summary of student and staff feedback is provided below.

Student feedback

Students identified both curricula and space and place issues with the WIL units. Within the curriculum the students considered there to be a lack of relevance of the unit content to the work context; lack of clarity in the alignment between content and assessment; discontinuity between the unit and work placement; and lack of detailed feedback. In terms of the issues of space and place familiar themes identified by students included restrictive attendance requirements and a lack of engagement in large, evening lectures.

The high student to staff ratio in this unit makes the experience quite depersonalised.

Some students with extensive work experience also identified the need for recognition of prior work experience - many signalling a need for greater flexibility in relation to timetabling to accommodate work commitments.

The timetabling of BEB701 was inflexible and inconvenient for the many students who need to work, attend lectures and also complete their placement hours.

Students requested more informative Blackboard (virtual course management system) announcements and that processes and resources be simplified and standardised. Students also requested information on transition-to-work, material to help promote work/study balance and workshops on generic employability skills. Some students requested better connections with other students in the unit or with those who had completed the unit previously:

It would have been helpful to hear about the experience of others who were taking the unit or those who had completed it earlier and what to expect, e.g. likely pay, workload, attitudes.

Other students asked that detailed assessment briefs be distributed early in semester. Some students commented on the use of reflection in assessment, asking whether reflection would be better incorporated into assessment and whether the work log book and the reflective journal could be merged into one task.

I consider the unit has a high number of separate pieces of assessment and since reflection is challenging and takes considerable time and effort, it would make sense to combine the journal and the log book.

Staff feedback

Problems and issues raised in staff feedback primarily related to pedagogy and working with diverse students. During staff interviews and in regular staff meetings participants identified the need, on the one hand, to provide a more challenging on-campus component for students with prior work experience, and, on the other hand, to cater appropriately for students with limited work experience. Staff pointed to the reality that some work placements can be more meaningful and challenging than others. Staff also recognised the need to advise students early in their course about the need to plan early in order to secure a work placement. The teaching team further flagged the issue of high workload associated with the ratio of students to staff and the overall challenges of working with large, diverse cohorts.

Discussion

Since gathering this feedback from students and staff concerns identified in relation to curriculum, pedagogy, learning places and spaces administrative processes, and assessment have been systematically addressed. A Faculty Learning and Teaching Grant supported some of this work. The specific objectives of the grant were to:

1. reconceptualise content of the first unit (BEB701) to include problem-based, collaborative learning and Career Development Learning (CDL);
2. increase student engagement and improve learning experiences through the incorporation of flexible learning strategies;
3. build staff capacity in working with new technologies and new learning spaces;
4. support Faculty's goal of implementing comprehensive flexible delivery by 2011, strengthening learning activities/links across an integrated curriculum.

The focus of the grant was to increase student engagement through the adoption of more flexible, blended learning approaches. Blended learning was defined as a way of maximising the advantages of face-to-face learning and multiple technologies to deliver learning through combinations of face-to-face instruction and asynchronous and/or synchronous computer technologies (So & Brush, 2008). The decision to introduce blended learning was based on evidence that many students were studying and working part time. Access to virtual classrooms could increase flexibility and access as well as help students feel engaged and connected (Loch Reushle, Jayne & Rowe, 2010).

The project started with a review of content across all WIL units; integrating problem-case based learning activities; and placing a stronger emphasis on critical reflection. Greater focus was placed on the technical performance of skills rather than mere observation and improvements were made to assessment tasks, criteria, and moderation processes. It was also decided that the first unit (BEB701) would be trialled over summer in response to student survey feedback which enthusiastically endorsed such an offering (staffing constraints meant

that it was not possible to trial the other units over summer despite student interest). Summer semester would provide an opportunity to complete the first unit whilst undertaking vacation work placements; afford students a chance to accelerate their degree; potentially reduce semester load; and increase connectivity between work experience and the unit.

In summer 2010 BEB701 was piloted in blended mode. The reconstructed format included an intensive, on-campus, seminar followed by three webinars (using Blackboard Collaborate) during the semester and student presentations on campus at the end of semester. This adjustment to the learning space was designed to help to address issues of access and flexibility as well as student engagement. The pilot, involving nineteen students across the engineering and built environment disciplines, received very positive feedback from students and staff. The summer pilot encouraged the project team to recommend the roll out of the model in first semester 2011 with a much larger cohort (i.e. 427 students). To accommodate the larger cohort several adjustments were made to the pilot version. For example, in first semester the on-campus seminar was held on a Saturday to minimise timetable clashes; student presentations were dropped because of problems with managing large numbers (but adopted across the other units); and webinars were assigned at least two moderators to help present material and encourage student engagement. According to Reynard (2007), one of the major and immediate benefits of the webinar resides in its ability to overcome the risk of students feeling isolated in large classes, being able to have direct communication with their instructor during the class, and simultaneously benefitting from the ability to observe the interactions of other students.

A targeted strategy was simultaneously developed to help students earlier in their course to source and negotiate a work placement. The *Preparing for WIL Strategy* included:

1. reviewing and updating the WIL website and Blackboard sites and resources (community and unit sites);
2. brief information sessions each semester in core discipline classes in second year;
3. lunch seminars each semester in collaboration with the Careers and Employment Service (including the promotion of CDL, self directed career modules and CareerHub for students to find work placement opportunities).

This included closer consideration of formative employer feedback on student performance in the work place. Table 3 summarises areas identified for improvement; responses made; and impacts reported by students and staff.

Table 3: Summary of areas identified for improvement; responses made; and impact of changes

Area for improvement	Response	Impact
Relevance and alignment of unit content, assessment and work experience	Review of all unit outlines, mapping of assessment tasks, and identification of learning outcomes. Correlation across unit content, assessment tasks, and work experiences highlighted and discussed in class through readings, industry speakers, and discipline groupings. Differentiated assessment with some flexibility for students with extensive work experience and those with	Staff and student feedback indicates clearer links between learning outcomes, assessment, and links to work experience and improved feedback, marking and moderation processes through staff development and mentoring.

	limited experience	
Continuity between unit/s and work placement for students who complete work experience before completing WIL unit/s	Incorporation of formative employer feedback on performance on work placement; students encouraged to keep structured work logs and reflective field notes and to start drafting assessment tasks whilst still in work place	Staff report improved record keeping including work logs/reflective field notes; and increased willingness of students to engage in reflective process. Evidence of work supervisors' engagement in formative feedback process.
Student engagement in earlier phases of the WIL prior to completing WIL unit/s	Preparing for WIL Strategy implemented including improved resources on Blackboard; presentations to core second year classes; and lunch time seminars with careers staff	Staff report increased engagement with motivated students earlier in their course and improved preparedness and reduction in student queries
Content and flexibility of delivery of on campus component of unit/s	Blended, problem based and collaborative learning strategies introduced. Staff and student development in using new technologies	Students and staff report increased engagement and improved balance between unit requirements and work placement commitments.
Staff workload associated with ratio of students to staff and challenges of working with large, diverse cohorts	Establishment of teaching teams and staff development prior to adoption of blended learning approaches	Staff feedback indicates improved collaboration amongst teaching team members e.g. improved communication and sharing of workload
Connectivity and work/life/study balance	Inclusion of past student and industry speakers in teaching sessions; structured peer review processes; links to online career modules embedded.	Student feedback reflects positive attitude and willingness to engage. Improved connectivity between students.
WIL administrative requirements	Introduction of online registration and sign-off process (i.e. WIL e-form); simplified insurance and Work Place Health and Safety information; timely advice including frequent, targeted and relevant faculty/cohort e-news and email announcements.	Student and staff feedback indicates streamlined policies and procedures have improved preparedness and reduction in student queries.

This continuous improvement approach also included promoting a whole-of-course responsibility for WIL; reaching out to other academic staff to increase understanding of WIL; and mapping associated employability and technical skill development across degrees.

The use of the technology has served to unite the WIL teaching staff more effectively. Staff have become more comfortable in the blended learning environment and are able to recognise and capitalise on improved social connections (O'Sullivan & Samarawickrenna, 2008). Other factors promoting teacher-connectedness include, the sharing of teaching resources and approaches and the staggering of the timetable over several nights maximising the way in which staff members work as a teaching team. With a carefully designed curriculum, these approaches yield rich learning environments and the enhancement of the socially constituted relationships and interactions between learner-teacher, learner-learner and teacher-teacher, as

well as new synergies in the relationships learner-content and content-content (O'Sullivan & Samarawickrenna, 2008).

Overall benefits achieved include the way in which the technology facilitated broader, beneficial connections between students.

The technology used gave me exposure to students I would not have normally interacted with such as design and urban development [students].

Another improvement was the streamlined timetable.

The [webinars] meant that it was like being at uni except that I was able to do it from the comfort of my own home.

Further improvements include a rationalised program of assessment.

Assessments were well balanced, not too heavy but also not too light and the reflective tasks were beneficial.

The contribution to professional development was also identified by this student as a strength:

It gives you theory and knowledge to analyse the workplace and gives you an opportunity to see your own negative and positive attributes and use these to advance yourself in the workplace and in skill development. ...it has helped me grow and reflect on my abilities as a professional. I believe this reflection can potentially help in determining my value in situations such as yearly performance/pay reviews and future job applications.

The improvements targeted have gone some way to improving relevance, effectiveness, and learning outcomes for students. Further, they have helped improve engagement and engendered a more positive attitude among students and staff. However, a subsequent 2012 faculty internal review of the overall WIL model and an evaluation of the blended learning strategy have identified other areas requiring development. For example, the evaluation of the blended learning strategy identified the benefits of WIL academic staff discussing their learning and teaching approaches and aims, such as more focused planning. However, it was suggested that whilst the approach offers flexibility through the different learning spaces and places, further development is needed in relation to pre and post webinar activities, content, teaching styles, student engagement, and partly due to staff turnover - further training for staff in the use of technology.

The faculty review of the overall WIL model was triggered, in part, by a faculty amalgamation and the integration of engineering and built environment disciplines with science and information technology. The review involved a self-audit, followed by a chaired panel review with invitations to key faculty staff and industry partners. This process acknowledged the complexities of the academic and administrative leadership of WIL. Several areas of concern were identified. These included the difficulties some students experience in trying to source and negotiate a work placement; continued disjuncture between work experience and the unit experienced by some students; and variations in the quality and integrity of work placements. The recommendations of the review panel related to the

implementation of an integrated faculty-wide approach within the new faculty structure; strengthening of student agency by encouraging students to find and negotiate the terms of their work placements; a whole-of-course approach to the development of employability skills and graduate attributes; and an increase in the level of resourcing.

Conclusion

Much has been learnt through the implementation, ongoing construction and evaluation of this embedded, student-negotiated model of WIL in the engineering and built environment disciplines. This increased understanding has led to improvements such as relevance, effectiveness, and learning outcomes; improved engagement; and more positive attitudes from students and staff. The model is of significant interest to others inside and outside the faculty and is recognised as being cross-disciplinary, holistic, cohesive, scalable, pedagogically sustainable and generally equitable. The model has proved successful in facilitating students' experience of practice in their professional area. Yet other issues have emerged related to time and resource constraints; changing paradigms in university priority structures; learning gaps in the transition-to-work process; more effective use of new on campus, collaborative learning spaces; and fragmented relationships between universities and industry partners (Peach, Larkin, Ruinard, 2012). The embedded model is seen by some as being accommodated at the expense of other elements of the curriculum. Many share strong concerns about the difficulties some students have in locating and negotiating a work placement. There is also support for increased engagement with industry partners and a willingness to take into account feedback from employers. More work is needed to ensure that the outcomes of the recent evaluation and review are implemented along with a process of continuous improvement into the future.

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